CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.06/HSN/WMM/Gradation/2013-14 20.12.2013

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. H.S. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to roads and drains at Mariyannapalya in Ward No. 06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/364/2012-13 Dated: 28.02.2013

Date of Testing : 20.12.2013

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **7510**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	225	225	3.0	97.0	95-100
22.4	2615	2840	37.8	62.2	60-80
11.2	1515	4355	58.0	42.0	40-60
4.75	840	5195	69.2	30.8	25-40
2.36	955	6150	81.9	18.1	15-30
0.600	575	6725	89.5	10.5	8-22
0.075	535	7260	96.7	3.3	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers
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Job No.: CTCE/BBMP/W.No.06/HS/SDBC/Bitumen/2013-14 26.12.2013

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. H.S. Nataraj,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to roads and drains at Mariyannapalya in Ward No. 06, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-TND/364/2012-13 Dated: 28.02.2013
SAMPLE I/D	Roads and drains at Mariyannapalya in Ward No. 06
DATE OF TESTING	26.12.2013

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476	475.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	24	24.50
7. Bitumen content in %	4.80	4.90
8. Average	**4.85**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	27.15	5.70	5.70	94.30	90-100
4.75	246.38	51.76	57.46	42.54	35-51
2.36	53.16	11.17	68.63	31.37	24-39
1.18	49.57	10.41	79.05	20.95	15-30
0.3	38.23	8.03	87.08	12.92	9-19
0.075	36.51	7.67	94.75	5.25	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	26.85	5.37	5.37	94.63	90-100
4.75	245.68	49.14	54.51	45.49	35-51
2.36	89.45	17.89	72.40	27.60	24-39
1.18	46.78	9.36	81.75	18.25	15-30
0.3	25.31	5.06	86.81	13.19	9-19
0.075	42.18	8.44	95.25	4.75	3-8

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